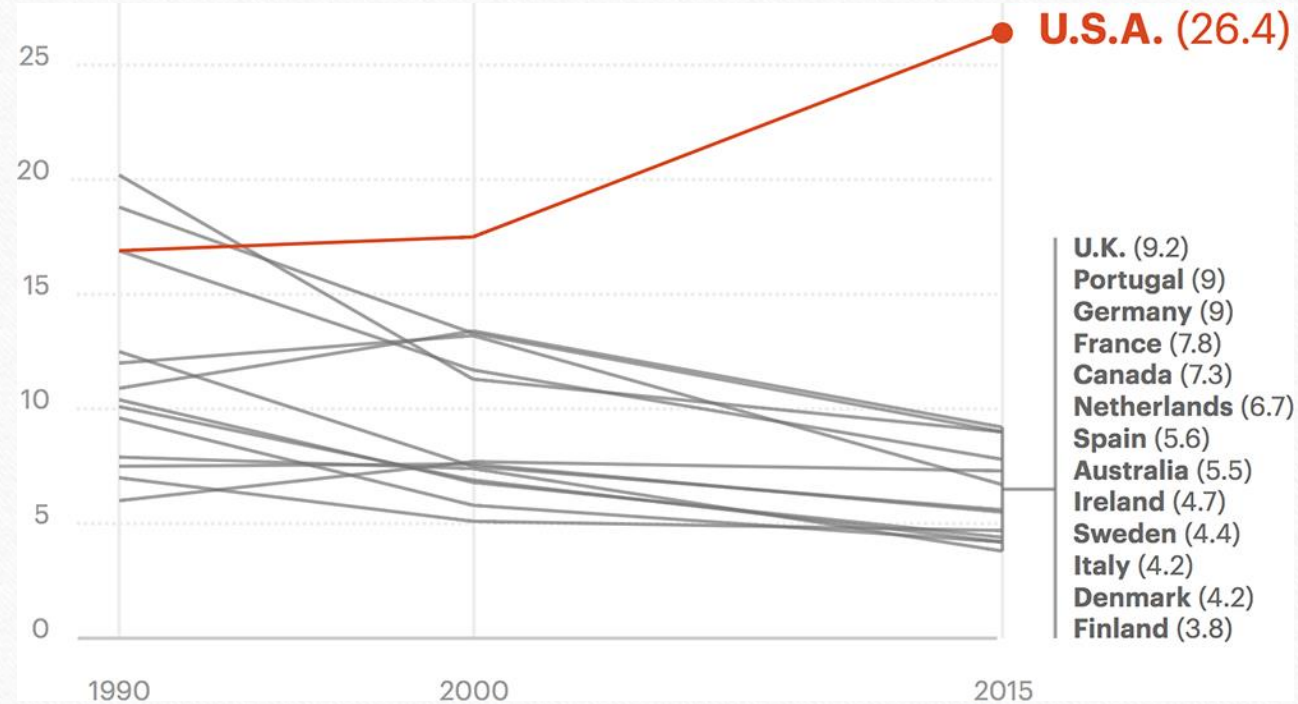


Reducing Maternal Mortality and Morbidity Cardiac Implications

Jaimie Chausmer, FNP-C, Northside Hospital Cardiovascular Care
Clinical Director Maternal Heart Health Clinic-Northside Hospital

Maternal Mortality Rises in US as declines everywhere else-Lancet 2015



Statistics-from the CDC

For 2011-2015:

- about 1/3 of deaths (31%) happened **during pregnancy**;
- about 1/3 (36%) happened **at delivery or in the week after**; and
- about 1/3 (33%) happened **1 week to 1 year postpartum**.
- 700 women die from pregnancy related complications each year in the US
- 3 in 5 could have been prevented

Pregnancy Deaths

- Over last 3 decades, pregnancy related deaths have more than doubled
- Sad reality is that our country is the “most dangerous” country in the developed world in which to give birth
- African Americans have highest incidence-perhaps genetics, environmental, more comorbidities

Leading Causes of Death GA 2012-2014

- Preeclampsia/Eclampsia
- Cardiomyopathy
- Cardiovascular Disease
- Hemorrhage
- Amniotic fluid Embolism
- Pulmonary Embolism

Preeclampsia

- Disorder only occurring in pregnancy(3-8%) and post partum period affecting mother and unborn baby. Usually after 20 weeks. Rapidly progressive condition characterized by high blood pressure, +- protein in urine, elevated liver function tests, reduced kidney function, fluid in lungs, visual changes/headache, decreased platelets
- Patients complain of bloating, shortness of breath, headache, anxiety, weight gain, visual changes, abdominal pain

Preeclampsia Causes

- Insufficient Blood flow to Placenta
- Excessive inflammatory response to pregnancy
- Nutritional Deficiencies
- Disruption in balance of hormones
- Genetic
- Injury to blood vessels due to excessive blood flow

Preeclampsia Risk factors

- African American
- Fertility treatment/multiples
- First pregnancy
- Change in Paternity
- Age greater than 35
- Hx of preeclampsia with past pregnancies
- Chronic htn, diabetes, kidney disease
- Family hx preeclampsia
- PCOS
- Autoimmune Disorders
- Obesity

Risk of CAD with Preeclampsia

- 3-4 times risk of developing hypertension, two times the risk for heart disease and stroke, and increased risk of diabetes. Some women have to be on medicine for short period after delivery, others have htn as a result
- In 2011 American Heart Association identifies women with history of preeclampsia at risk for Coronary Artery Disease
- Need yearly check of BP, cholesterol and Blood sugar

Maternal Heart Health Clinic

- Established 2014 to educate new mothers about risk of CAD. Often mothers focus on caring for their children instead of themselves. My clinic shifts emphasis back to the mother taking care of herself, so she will be there to take care of her family in the long term
- Meet with Exercise Physiologist, Nutritionist and Myself
- Follow up with those highest risk
- Working on Phase 2

Post partum Cardiomyopathy

- Weakened heart muscle that occurs between last month and 6 months post partum
- Heart doesn't squeeze forcefully enough to pump adequate amounts of blood to the body's organs
- Puts at increased risk for abnormal heart rhythms, blood clots, and sudden cardiac death

Causes and Risk for Post partum cardiomyopathy

- ? Inflammatory
- Genetic
- Exaggerated immune response to pregnancy
- African American, obese, preeclampsia, twins, age greater 35

Symptoms –LOOK like pregnancy

- Shortness of breath with activity and laying flat
- Swelling ankles
- Bloating
- Fatigue
- Feeling heart beating
- Decreased activity tolerance

What can we do?

Heart Failure Clinic

- Bi weekly visits-adjust meds, check labs, patient education –monitor weight
- Medications, low sodium diet
- To reduce hospital readmissions

Reasons for increased mortality

- The reasons for higher maternal mortality in the U.S. are many fold. New mothers are older than they used to be, with more complex medical histories
- Half of pregnancies in the U.S. are unplanned, so many women don't address chronic health issues beforehand
- Access to healthcare. Many live in rural areas-limited to none
- Missed or delayed diagnosis/not recognizing warning signs
- Obesity before pregnant
- Outdated notions that delivery cures all

Reducing Mortality

What Can Be done?

- During pregnancy –improve access to and delivery of quality prenatal care, includes managing chronic conditions/educating warning signs
- At delivery: Standardized patient care, delivering high risk patients where appropriate staff/equipment are
- Postpartum –provide care for up to a year post partum, communication with staff/patients

What can we do?

- Community outreach, Health fairs
- Educational meetings with Multi-disciplinary Team
- Educating staff at hospital
- ?Telemed for rural areas
- Extend post partum Period for up to a Year. Medicaid only covers for 60 days. It might take time for symptoms to occur and patient to get appointment—55% of women in GA died within 42 days post partum.

CMQCC-California Maternal Quality Care Collaborative

- Aim to improve healthcare response to leading cause of PREVENTABLE death among pregnant and postpartum women
- Multiple toolkits exist-Many hospitals are adapting them. Free to use and all institutions should adhere to them

Conclusion

- Limited Awareness results in missed opportunities for early recognition of women who are increased risk for problems later in life. Changes we make today can have an impact for a healthier tomorrow